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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/780,621

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Takashi Imai

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10/02/2009

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EXAMINER

HASSAN, AURANGZEB

ART UNIT

PAPER NUMBER

2182

MAIL DATE

DELIVERY MODE

10/02/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/780,621	Applicant(s) IMAI, TAKASHI	
	Examiner AURANGZEB HASSAN	Art Unit 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/13/2009 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 18, 19, 23 – 25 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanai et al (US Publication Number 2004/0153597 hereinafter “Kanai”) in view of Overtom et al. (US Patent Number 6,732,218, hereinafter “Overtom”).

4. As per claim 18 Kanai teaches an information processing apparatus capable of communication with apparatuses connected thereto, comprising: a USB device

controller connectable with a USB host apparatus for controlling communication between the connected USB host apparatus and said information processing apparatus (USB function controller 24 connectable to external USB function device 200, figure 3); a USB host controller connectable with a USB device apparatus for controlling communication between the connected USB device apparatus and said information processing apparatus (USB host controller 23 connectable to external USB host device 100, figure 3); a connection unit having a plurality of connectors, wherein each connector is for the USB host apparatus and the USB device apparatus (transceiver 25, figure 3); a controller connected with each of a plurality of apparatuses through said USB device controller or said USB host controller (29, figure 3); and a switching unit (Switching control register 27C, figure 3) for switching a connection between each of the connectors and one of said USB device controller and said USB host controller, wherein said switching unit determines the type (figure 12) of the connected apparatus to the connector, and if it is determined that the connected apparatus is the USB device apparatus connects the USB device apparatus with the USB host controller (USB communication of device with host, figure 4, paragraphs [0063 – 0064]) and, if it is determined that the connected apparatus is the USB host apparatus, connects the USB host apparatus with the USB device controller (USB communication of host with device, figure 4, paragraphs [0063 – 0064]).

Kanai does not disclose a switching unit that determines the type of apparatus connected to the connector for each connector such that each connector can be connected to either host or device.

Overtoom discloses a switching unit that determines the type of apparatus connected (column 2, line 55 – column 3, line 10) to the connector for each connector and determines whether the apparatus connected to the connector is directed to a host controller or to a device controller (column 4, lines 11 – 45, determining the OTG supplement to switch for a host or peripheral device accordingly).

It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify Kanai with the above teachings of Overtoom which describe the enhanced USB functionality included in the OTG supplement to the USB 2.0 specification. One of ordinary skill would be motivated to make such modification in order to enhance the communication in a USB environment (column 1, lines 33 - 59).

5. As per claims 23 and 28, Kanai teaches a method and computer-readable storage medium, for an information processing apparatus capable of communication with apparatuses comprising a USB device controller connectable with a USB host apparatus for controlling communication between the connected USB host apparatus and the information processing apparatus (USB function controller 24 connectable to external USB function device 200, figure 3), a USB host controller connectable with a USB device apparatus for controlling communication between the connected USB device apparatus and the information processing apparatus (USB host controller 23 connectable to external USB host device 100, figure 3), a connection unit having a plurality of connectors, wherein each connector is for connecting the USB host apparatus and the USB device apparatus, and a controller connected with each of a

plurality of apparatuses through the USB device controller or the USB host controller (transceiver 25, figure 3); and a switching unit (Switching control register 27C, figure 3), said method comprising: a switching step for switching a connection between each of the connectors and one of the USB device controller and the USB host controller for determining the type of the connected apparatus and if it is determined that the connected apparatus is the USB device apparatus, for connecting the USB device apparatus with the USB host controller (USB communication of device with host, figure 4, paragraphs [0063 – 0064]) and, if it is determined that the connected apparatus is the USB host apparatus, for connecting the USB host apparatus with the USB device controller (USB communication of host with device, figure 4, paragraphs [0063 – 0064]); a device control step for controlling, by means of the USB device controller, communication between the USB host apparatus and the information processing apparatus (USB function controller 24 connectable to external USB function device 200, figure 3); a host control step for controlling, by means of the USB host controller, communication between the USB device apparatus and the information processing apparatus (USB host controller 23 connectable to external USB host device 100, figure 3).

Kanai does not disclose a switching unit that determines the type of apparatus connected to the connector for each connector such that each connector can be connected to either host or device.

Overtoom discloses a switching unit that determines the type of apparatus connected (column 2, line 55 – column 3, line 10) to the connector for each connector

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and determines whether the apparatus connected to the connector is directed to a host controller or to a device controller (column 4, lines 11 – 45, determining the OTG supplement to switch for a host or peripheral device accordingly).

It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify Kanai with the above teachings of Overtoom which describe the enhanced USB functionality included in the OTG supplement to the USB 2.0 specification. One of ordinary skill would be motivated to make such modification in order to enhance the communication in a USB environment (column 1, lines 33 - 59).

6. Kanai modified by the teachings of Overtoom as seen in claim 18 above, as per claims 19 and 24, Kanai teaches an apparatus and method wherein the connectors are AB type connectors in conformity with the Universal Serial Bus communication standards, and wherein if a B type connector is connected with said connection unit, it is determined in said determination step that the connected unit is the USB host unit (131, figure 9).

7. Kanai modified by the teachings of Overtoom as seen in claim 18 above, as per claims 20 and 25, Kanai teaches an apparatus and method wherein the connectors are AB type connectors in conformity with the Universal Serial Bus communication standards, and wherein if an A type connector is connected with the connection unit, it is determined in said determination step that the connected unit is the USB device unit (231, figure 9).

8. Claims 21, 22, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanai in view of Overtoom further in view of Ying et al. (US Publication Number 2003/0172223, hereinafter “Ying”).

9. As per claims 21 and 26, Kanai teaches an apparatus and method comprising: an execution status determination step of determining an execution status of said device control step and said host control step (switching determines whether the host device or function device is connected, paragraph [0060]).

Kanai/Overtoom fails to teach a warning step of, if it is determined in said execution status determination step that said device control step or said host control step is in execution, and said control step, selected from said first step and said host control step in correspondence with the type of the connected unit determined in said determination step and controlling communication between the connected unit and the information processing apparatus, is in execution, giving a warning to an operator of the information processing apparatus, wherein in said selection step, said control step that is in execution is selected as said control step of controlling communication between the external unit and the information processing apparatus.

Ying analogously teaches an apparatus and method comprising: a warning step of (busy, paragraph [0034]), if it is determined at said execution status determination step that said device control step or said host control step is in execution, and said control step, selected from said device step and said host control step in

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correspondence with the type of said external unit determined by said determination step (connected and induced from the data input ends D+ and D-, paragraphs [0030-0032]) and controlling communication between said external unit and said information processing apparatus, is in execution, giving a warning to an operator (displayed as red, yellow and green, paragraph [0040]) of said information processing apparatus, wherein at said selection step, said control unit in execution is selected as said control step of controlling communication between said external unit and said information processing apparatus .

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Kanai with the above teachings of Ying. One of ordinary skill in the art at the time of the applicant's invention would have been motivated to make such modification in order to be able to clearly tell the user the current situation of the host, in a USB switching environment so the user may operate under a friendlier atmosphere (paragraph [0016]).

10. Kanai/Overtoom modified by the teachings of Ying as applied to claim 21 above, as per claims 22 and 27, Ying teaches an apparatus and method wherein if it is determined in said use status determination step that said control step in execution is no longer in execution (red light displayed when sharer is busy and host can not switch, paragraph [0040]), said control step that has been in execution is selected in said selection step as said control step of controlling communication between the external

unit and the information processing apparatus (yellow light displayed when host is not in an online state and no other host is using the USB, paragraph [0040]).

Response to Arguments

11. Applicant's arguments with respect to claims 18 - 28 have been considered but are moot in view of the new ground(s) of rejection.

All of the Applicant's arguments are directed to newly amended claims for which a new ground of rejection has been cited and are therefor moot.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AURANGZEB HASSAN whose telephone number is (571)272-8625. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AH

/Ilwoo Park/
Primary Examiner, Art Unit 2182
9/30/2009